

Amendments to the Claims

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

- 1 1. (Currently Amended) A method for finding a selected data service in a computer
2 system having a distributed lookup ~~system~~ service and a first host computer, the
3 method comprising:
 - 4 (a) running a first federated bean in the first host computer, the first federated
5 bean having a cache memory and a plurality of methods for retrieving
6 information from the cache memory;
 - 7 (b) receiving in the first federated bean, for each data service that has
8 registered with the distributed lookup service, a notification containing a
9 proxy to the data service, the first federated bean thereupon storing the
10 proxy in the cache memory;
 - 11 (c) using the distributed lookup service to locate the first federated bean; and
 - 12 (d) calling a method in the located first federated bean to retrieve from the
13 cache memory a proxy to the selected data service.

- 1 2. (Currently Amended) The method of claim 1 wherein the computer system
2 comprises a second host computer and the method further comprises:
 - 3 (e) registering a second federated bean in the second host computer with the
4 distributed lookup service; and
 - 5 (f) receiving in the first federated bean a notification from the distributed
6 lookup service, the notification containing information concerning a
7 location of the second federated bean, the first federated bean thereupon
8 storing the information in the cache memory.

- 1 3. (Currently Amended) The method of claim 2 wherein a second selected data
2 service is available on the second host computer and wherein step (f) comprises
3 receiving in the first federated bean a notification from the distributed lookup
4 service, the notification containing a name of the second host computer and a
5 location of a second lookup service containing a proxy to the second selected
6 data service.
- 1 4. (Original) The method of claim 3 further comprising:
2 (g) using the name of the second host computer and the location of a second
3 lookup service to retrieve the proxy to the second selected data service;
4 and
5 (h) using the retrieved proxy to control the second selected data service.
- 1 5. (Original) The method of claim 4 wherein step (d) comprises calling a method in
2 the located first federated bean to retrieve from the cache memory the
3 information concerning the location of the second federated bean.
- 1 6. (Currently Amended) The method of claim 2 wherein step (f) comprises receiving
2 in the first federated bean a notification from the distributed lookup service, the
3 notification containing an object containing information for locating the second
4 federated bean, the first federated bean thereupon storing the object in the cache
5 memory.
- 1 7. (Original) The method of claim 1 wherein the method further comprises:
2 (e) using the retrieved proxy to control the selected data service.
- 1 8. (Original) The method of claim 7 wherein the selected data service has an
2 interface with a plurality of methods and wherein step (e) comprises using the
3 retrieved proxy to call at least one of the plurality of methods in the interface.

1 9. (Currently Amended) Apparatus for finding a selected data service in a computer
2 system having a distributed lookup system service and a first host computer, the
3 apparatus comprising:

4 a first federated bean in the first host computer, the first federated bean
5 having a cache memory and a plurality of methods for retrieving information from
6 the cache memory;

7 a listener that receives in the first federated bean, for each data service
8 that has registered with the distributed lookup service, a notification containing a
9 proxy to the data service, the first federated bean having a mechanism that
10 stores the proxy in the cache memory;

11 a mechanism that uses the distributed lookup service to locate the first
12 federated bean; and

13 a mechanism that calls a method in the located first federated bean to
14 retrieve from the cache memory a proxy to the selected data service.

1 10. (Currently Amended) The apparatus of claim 9 wherein the computer system
2 comprises a second host computer and the apparatus further comprises:

3 a mechanism that registers a second federated bean in the second host
4 computer with the distributed lookup service; and

5 wherein the notification from the distributed lookup service contains
6 information concerning a location of the second federated bean and wherein the
7 first federated bean thereupon stores the information in the cache memory.

1 11. (Currently Amended) The apparatus of claim 10 wherein a second selected data
2 service is available on the second host computer and wherein the notification
3 from the distributed lookup service contains a name of the second host computer
4 and a location of a second lookup service containing a proxy to the second
5 selected data service.

- 1 12. (Original) The apparatus of claim 11 further comprising:
2 a method in the first federated bean that uses the name of the second
3 host computer and the location of a second lookup service to retrieve the proxy
4 to the second selected data service; and
5 a mechanism that uses the retrieved proxy to control the second selected
6 data service.
- 1 13. (Original) The apparatus of claim 12 wherein the mechanism that calls a method
2 in the located first federated bean to retrieve from the cache memory a proxy to
3 the selected data service comprises a mechanism that calls a method in the
4 located first federated bean to retrieve from the cache memory the information
5 concerning the location of the second federated bean.
- 1 14. (Currently Amended) The apparatus of claim 10 wherein the notification from the
2 distributed lookup service containing information concerning the location of the
3 second federated bean contains an object containing information for locating the
4 second federated bean and the first federated bean having a mechanism that
5 stores the object in the cache memory.
- 1 15. (Original) The apparatus of claim 9 further comprising a mechanism that uses the
2 retrieved proxy to control the selected data service.
- 1 16. (Original) The apparatus of claim 15 wherein the selected data service has an
2 interface with a plurality of methods and wherein the mechanism that uses the
3 retrieved proxy to control the selected data service comprises a mechanism that
4 uses the retrieved proxy to call at least one of the plurality of methods in the
5 interface.

1 17. (Currently Amended) A computer program product for finding a selected data
2 service in a computer system having a distributed lookup ~~system~~ service and a
3 first host computer, the computer program product comprising a computer usable
4 medium having computer readable program code thereon, including:

5 first federated bean program code operable in the first host computer, the
6 first federated bean program code establishing a cache memory in the first host
7 computer and having a plurality of methods for retrieving information from the
8 cache memory;

9 program code that receives in the first federated bean, for each data
10 service that has registered with the distributed lookup service, a notification
11 containing a proxy to the data service, the first federated bean thereupon storing
12 the proxy in the cache memory;

13 program code that uses the distributed lookup service to locate the first
14 federated bean; and

15 program code that calls a method in the located first federated bean to
16 retrieve from the cache memory a proxy to the selected data service.

1 18. (Currently Amended) The computer program product of claim 17 wherein the
2 computer system comprises a second host computer and the computer program
3 product further comprises:

4 program code that registers a second federated bean in the second host
5 computer with the distributed lookup service; and

6 program code that receives in the first federated bean a notification from
7 the distributed lookup service, the notification containing information concerning
8 a location of the second federated bean, the first federated bean thereupon
9 storing the information in the cache memory.

1 19. (Original) The computer program product of claim 18 wherein a second selected
2 data service is available on the second host computer and wherein the
3 notification containing information concerning a location of the second federated

bean contains a name of the second host computer and a location of a second lookup service containing a proxy to the second selected data service.

20. (Original) The computer program product of claim 19 further comprising:

program code that uses the name of the second host computer and the location of a second lookup service to retrieve the proxy to the second selected data service; and

program code that uses the retrieved proxy to control the second selected data service.

21. (Currently Amended) A computer data signal embodied in a carrier wave embedded in a computer readable medium, wherein a processor reads the data signal in the medium and performs program code read from the data signal for finding a selected data service in a computer system having a distributed lookup system service and a first host computer, the computer data signal comprising:

first federated bean program code operable in the first host computer, the first federated bean program code establishing a cache memory in the first host computer and having a plurality of methods for retrieving information from the cache memory;

program code that receives in the first federated bean, for each data service that has registered with the distributed lookup service, a notification containing a proxy to the data service, the first federated bean thereupon storing the proxy in the cache memory;

program code that uses the distributed lookup service to locate the first federated bean; and

program code that calls a method in the located first federated bean to retrieve from the cache memory a proxy to the selected data service.

1 22. (Currently Amended) Apparatus for finding a selected data service in a computer
2 system having a distributed lookup ~~system~~ service and a first host computer, the
3 apparatus comprising:

4 first federated bean means in the first host computer, the first federated
5 bean means having a cache memory and means for retrieving information from
6 the cache memory;

7 means for receiving in the first federated bean, for each data service that
8 has registered with the distributed lookup service, a notification containing a
9 proxy to the data service, the first federated bean having means for storing the
10 proxy in the cache memory;

11 means for using the distributed lookup service to locate the first federated
12 bean; and

13 means in the located first federated bean for retrieving from the cache
14 memory a proxy to the selected data service.

1 23. (Currently Amended) The apparatus of claim 22 wherein the computer system
2 comprises a second host computer and the apparatus further comprises:

3 means for registering a second federated bean in the second host
4 computer with the distributed lookup service; and

5 means for receiving in the first federated bean a notification from the
6 distributed lookup service, the notification containing information concerning a
7 location of the second federated bean, the first federated bean thereupon storing
8 the information in the cache memory.

1 24. (Currently Amended) The apparatus of claim 23 wherein a second selected data
2 service is available on the second host computer and wherein the notification
3 from the distributed lookup service contains a name of the second host computer
4 and a location of a second lookup service containing a proxy to the second
5 selected data service.

- 1 25. (Original) The apparatus of claim 24 further comprising:
2 means in the first federated bean for using the name of the second host
3 computer and the location of a second lookup service to retrieve the proxy to the
4 second selected data service from the cache memory; and
5 means for using the retrieved proxy to control the second selected data
6 service.
- 1 26. (Original) The apparatus of claim 25 wherein the means for retrieving from the
2 cache memory in the first federated bean a proxy to the selected data service
3 comprises means for calling a method in the located first federated bean to
4 retrieve from the cache memory the information concerning the location of the
5 second federated bean.
- 1 27. (Currently Amended) The apparatus of claim 23 wherein the notification from the
2 distributed lookup service containing information concerning the location of the
3 second federated bean contains an object containing information for locating the
4 second federated bean and the first federated bean comprises means for storing
5 the object in the cache memory.
- 1 28. (Original) The apparatus of claim 22 further comprising means for using the
2 retrieved proxy to control the selected data service.
- 1 29. (Original) The apparatus of claim 28 wherein the selected data service has an
2 interface with a plurality of methods and wherein means for using the retrieved
3 proxy to control the selected data service comprises means for using the
4 retrieved proxy to call at least one of the plurality of methods in the interface.